

REMARKS

This is a full and timely response to the outstanding Office Action mailed August 6, 2004. Upon entry of this response, claims 1-18 remain pending in the present application.

In the Office Action, pending claims 1-18 have been preliminarily rejected for obviousness under 35 U.S.C. § 103(a). The Applicant traverses all of the rejections of the Office Action. Reconsideration and allowance of the subject application and presently pending claims 1-18 is respectfully requested.

I. Response To Claim Rejections Based On Obviousness

In the Office Action, claims 1-4, 6, 8, 10-12, 14, and 16-18 have been preliminarily rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,018,682 to Rise (hereinafter "Rise") in view of U.S. Patent No. 5,682,882 to Lieberman (hereinafter "Lieberman"). Claims 5, 7, 13, and 15 have been preliminarily rejected under 35 U.S.C. §103(a) as being unpatentable over Rise and Lieberman in view of U.S. Patent No. 5,717,825 to Lamblin (hereinafter "Lamblin"). Claim 9 has been preliminarily rejected under 35 U.S.C. §103(a) as being unpatentable over Rise and Lieberman and Lamblin in view of U.S. Patent No. 6,188,777 to Darrell et al. (hereinafter "Darrell"). It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must teach, disclose, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., In re Dow Chemical, 5 U.S.P.Q. 2d 1529, 1531 (Fed. Cir. 1988), and In re Keller, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

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The Applicant respectfully submits that it is not the Applicant's burden to prove that no teaching, suggestion, or motivation exists within the prior art that would lead one of ordinary skill to make the particular combination of elements, as claimed. Instead, the initial burden is upon the Patent Office to establish a prima facie case of obviousness. Such a prima facie showing includes an identification of a proper suggestion or motivation within the prior art to make the combination. Nevertheless, the Applicant has closely reviewed the references applied by the Office Action and has been unable to identify any suggestion, motivation, or other teaching contained within these references or elsewhere in the prior art that would lead one of ordinary skill in the art (without the benefit of hindsight) to make the combination (both structure and function) as set forth in the claims of the present application.

Therefore, if the Examiner intends to maintain the obviousness rejections, based upon a combination of prior art references, the Applicant respectfully requests that the Examiner identify the specific teachings within the prior art that would suggest the desirability or motivation for the particular combination of elements as claimed.

A. Claim 1

Independent claim 1 reads:

A method of obtaining information regarding an environment for an individual, having preferred modalities and engaged in activity, using a programmable device, said method comprising the steps of:

sensing at least one ***psychomotor behavioral element*** of the activity engaged by the individual; and
determining the ***preferred modalities of the individual based on the psychomotor behavioral element*** of the activity engaged by the individual.

(Emphasis Added)

The Applicant respectfully submits that Rise in view of Lieberman, fails to teach, disclose, or suggest at least the above-emphasized element of claim 1.

Specifically, Rise in view of Lieberman fails to at least teach, disclose, or suggest sensing a psychomotor behavioral element. The Office Action proposes, fairly, that Rise teaches sensing a psychomotor behavioral element. In fact, Rise suggests (at column 1, lines 23-25) that a psychomotor behavioral element, or precondition thereof, is being sensed. However, Rise does not teach sensing psychomotor behavioral elements. Rise teaches sensing neuromotor behavioral elements. Rise fails to teach, disclose or suggest sensing at least one psychomotor behavioral element.

The Cognitive Science Laboratory of Princeton University has developed an online reference system that best describes the difference between psychomotor activity and neuromotor activity (see www.cogsci.princeton.edu/~wn/index.shtml). Therein, neuromotor is defined as "relating to a nerve fiber or impulse passing toward motor effectors", while psychomotor is defined as "of or relating to or characterizing mental events that have motor consequences or vice versa." Delving further into these definitions, an impulse is a sudden excitation of nerve fibers that result in physiological activity while mental events involve a conscious or unconscious mental process. As an example, think about getting the chills. A movie actor can

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consciously imitate getting the chills, which would be psychomotor behavior. A person can think about a really cold place or situation and unconsciously give themselves the chills, which is also psychomotor behavior. However, when a cold wind hits you and causes a sudden excitation of nerve fibers that results in the chills, that physiological activity

is neuromotor behavior. Having a seizure is not the result of a conscious or unconscious mental process, but is the result of a neurological process and, hence, is not psychomotor behavior. The Applicant's original disclosure, in several locations, discussed neurological and psychological activity and neurolinguistics with psycholinguistics in ways indicative of an understanding the two sciences are separate and the Applicant appropriately limited the claims herein to psychomotor behavioral activities. Rise teaches sensing neuromotor behavioral activity and the physiological activities related thereto (see col. 2, lines 61-67). Rise does not teach, disclose, or suggest sensing at least one psychomotor behavioral activity.

Specifically, Rise in view of Lieberman fails to at least teach, disclose, or suggest determining preferred modalities of the individual based on the psychomotor behavioral element. At paragraph 77 of the Applicant's original disclosure, preferred modalities are defined as "the conscious or nonconscious desires of the individual to experience her environment in a specific manner." Lieberman teaches various methods of measuring, quantifying, and maximizing the responsiveness (also referred to as "vigilance" in Lieberman) of individuals. Lieberman teaches methods of determining the effect of the environment on the responsiveness of an individual. Lieberman teaches making changes to the environment to increase the

responsiveness of the individuals. However, Lieberman does not teach, disclose, or suggest determining the preferred modalities of individuals. Lieberman does not teach, disclose, or suggest determining the conscious or nonconscious desires of the individual to experience her environment in a specific manner. As stated in col. 2, lines 36-39, "a primary object of [Lieberman] is to monitor the alertness and vigilance of human subjects and to detect such degradations in such vigilance which may affect performance." Lieberman is not

interested in any preferred modality of an individual; it is only concerned with how responsive/vigilant/alert the person is being.

As can readily be seen, the Applicant's claim is limited to sensing psychomotor behavior elements and determining preferred modalities based on those psychomotor behavior elements, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

B. Claims 2-11

The Applicant respectfully submits that since claims 2-11 depend on independent claim 1, claims 2-11 contain all limitations of independent claim 1. Since independent claim 1 should be allowed, as argued above, pending dependent claims 2-11 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

1. Claim 2

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Claim 2 presently reads:

The method of claim 1 further comprising modifying at least one modifiable environmental unit to at least partially conform to the preferred modalities.

The Office Action states that Rise teaches the above limitation at col. 5, lines 12-20. This passage of Rise teaches a sensor for detecting the presence of chemical substances. It is unclear from the rejection whether the Office Action considers a sensor to be a modifiable environmental unit. The Applicant assumes it was the intent of the Office Action to identify the sensor as the modifiable environmental unit, in which case, the passage lacks suggestion that the sensor is modified to conform with preferred modalities of the individual.

As expressed at least in the summary section of the Applicant's patent application, the modifiable environmental units are part of the individual's environment and, in accordance with this limitation, may be modified to conform to the preferred modalities of the individual. Particularly, the environment of an individual is modified in response to the programmable device's determination of the preferred modalities of the individual. Logistically, it is unclear how a sensor can be used to modify an environmental unit based on the determination of a programmable device.

As can readily be seen, the Applicant's claim is limited to modifying at least one modifiable environmental unit to at least partially conform to the preferred modalities, rendering the claim nonobvious in view of Rise and Lieberman.

Therefore, the Applicant respectfully requests withdrawal of the present rejection.

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2. Claim 4

Claim 4 presently reads:

The method of claim 1 further comprising storing the sensed psychomotor behavioral element in a user history.

The Office Action states that Rise teaches the above limitation at col. 7, lines 64-67 and col. 8, lines 1-7. This passage of Rise teaches programming parameters into a sensor. The Applicant is limiting the invention to storing information sensed (namely, sensed psychomotor behavioral elements) in a user history. Rise does not appear to teach storing sensed information. More importantly, as outlined above, Rise does not teach sensing psychomotor behavioral elements and Rise does not teach storing, in any type of memory, psychomotor behavioral elements that are sensed.

As can readily be seen, the Applicant's claim is limited to storing the sensed psychomotor behavioral element in a user history, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

3. Claim 5

The Applicant respectfully submits that since claim 5 depends on dependent claim 4, claim 5 contains all limitations of dependent claim 4. Since dependent claim 4 should be allowed, as argued above, pending dependent claim 5 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

Further, the Office Action preliminarily rejects Claim 5 as obvious based on Rise, in view of Lieberman and further in view of Lamblin. The Office Action states

that "it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the Lamblin's algebraic code excited linear speech coding with Rise and Lieberman because that would have allowed users of Rise and Lieberman to analyze various waveforms that related to psychomotor behavior of humans." The Applicant does not see a suggestion in Lamblin to suggest that the linear algebraic transforms therein can be applied to any collection of data to "bring the advantages of analyzing specific samples improving overall system quality." The Applicant does not see a disclosure in Rise or Lieberman that would suggest the data therein could be better analyzed through the use of linear algebraic transforms. The Applicant does not see teaching, disclosure, or suggestion in Rise, Lieberman, or Lamblin to **store** the sensed psychomotor behavioral elements in the form of linear algebraic transforms.

As can readily be seen, the Applicant's claim is limited to storing the sensed psychomotor behavioral element in terms of preferred representational geometries via linear algebraic transforms, rendering the claim nonobvious in view of Rise, Lamblin and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

4. Claim 6

Claim 6 presently reads:

The method of claim 1 wherein the step of determining preferred modalities includes determining a preferred combination of modalities and an ordering of modalities by preference thereby further defining a focus of the individual's attention.

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The Office Action states that Rise teaches the above limitation at col. 8, lines 8-17. At first glance, this passage of Rise claims to cover a "flow chart for providing a patient with a seizure", but perhaps, more aptly, can be viewed as a method for getting the attention of a patient about to have a seizure. This passage is very different from the Applicant's claimed limitation. This limitation is related to the organization of multiple determined preferred modalities of the individual, the organization of which results in identifying where an individual's attention is focused. In other words, the Rise passage is capturing a person's attention, while the Applicant is claiming, in this limitation, seeing where the person's attention is focused.

As can readily be seen, the Applicant's claim is limited to determining a preferred combination of modalities and an ordering of modalities by preference, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

5. Claims 7-9

The Applicant respectfully submits that since claims 7-9 depend on dependent claim 6, claims 7-9 contain all limitations of dependent claim 6. Since dependent claim 6 should be allowed, as argued above, pending dependent claims 7-9 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

a. Claim 7

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Further, the Office Action preliminarily rejects Claim 7 as obvious based on Rise, in view of Lieberman and further in view of Lamblin. The Office Action states that "it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the Lamblin's algebraic code excited linear speech coding with Rise and Lieberman because that would have allowed users of Rise and Lieberman to analyze various waveforms that related to psychomotor behavior of humans." The Applicant does not see a suggestion in Lamblin to suggest that the linear algebraic transforms therein can be applied to any collection of data to "bring the advantages of analyzing specific samples improving overall system quality." The Applicant does not see a disclosure in Rise or Lieberman that would suggest the data therein could be better analyzed through the use of linear algebraic transforms. The Applicant does not see teaching, disclosure, or suggestion in Rise, Lieberman, or Lamblin to sort modalities by preference whereby the combination and the order are placed in at least one respective co-ordinate group of representational geometry to which attention of the individual is drawn.

As can readily be seen, the Applicant's claim is limited to modifying the environmental unit to provide content in the environment in the preferred combination of modalities and the order of modalities by preference whereby the combination and the order are placed in at least one respective co-ordinate group of representational geometry to which attention of the individual is drawn, as indicated by the psychomotor behavioral element, rendering the claim nonobvious in view of Rise, Lamblin and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

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6. Claim 8

Claim 8 presently reads:

The method of claim 6 further comprising: defining a psychodynamic and a cognitive behavioral model using the preferred combination of modalities and the order of modalities; and modifying at least one environmental unit as a function of the psychodynamic behavioral model and the cognitive behavioral model.

Neither Rise, nor Lieberman, teach, disclose, or suggest a psychodynamic behavioral model or a cognitive behavioral model, or does the Office Action suggest that either of these behavioral models is taught, disclosed, or suggested by either reference.

As can readily be seen, the Applicant's claim is limited to defining a psychodynamic and a cognitive behavioral model using the preferred combination of modalities and the order of modalities, rendering the claim nonobvious in view of Rise and

Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

C. Claim 12

Independent claim 1 reads:

A programmable apparatus for obtaining information regarding an environment to an individual having preferred modalities, said apparatus comprising:

at least one sensor for **sensing psychomotor behavioral activity** of the individual; and

a processing unit connected to the sensor for receiving the sensed psychomotor behavioral activity and **calculating the individual's preferred**

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modalities based on the sensed psychomotor behavioral activity.

(Emphasis Added)

The Applicant respectfully submits that Rise in view of Lieberman, fails to teach, disclose, or suggest at least the above-emphasized element of claim 1.

Specifically, Rise in view of Lieberman fails to at least teach, disclose, or suggest sensing psychomotor behavioral activity. The Office Action proposes, fairly, that Rise teaches sensing a psychomotor behavioral activity. In fact, Rise suggests (at column 1, lines 23-25) that a psychomotor behavioral activity, or precondition thereof, is being sensed. However, Rise does not teach sensing psychomotor behavioral activity. Rise teaches sensing neuromotor behavioral activity. Rise fails to teach, disclose or suggest sensing at least one psychomotor behavioral activity.

The Cognitive Science Laboratory of Princeton University has developed an online reference system that best describes the difference between psychomotor activity and neuromotor activity (see www.cogsci.princeton.edu/~wn/index.shtml). Therein, neuromotor is defined as "relating to a nerve fiber or impulse passing toward motor effectors", while psychomotor is defined as "of or relating to or characterizing mental events that have motor consequences or vice versa." Delving further into these definitions, an impulse is a sudden excitation of nerve fibers that result in physiological activity while mental events involve a conscious or unconscious mental process. As an example, think about getting the chills. A movie actor can consciously imitate getting the chills, which would be psychomotor behavior. A person can think about a really cold place or situation and unconsciously give themselves the chills, which is also psychomotor behavior. However, when a cold

wind hits you and causes a sudden excitation of nerve fibers that results in the chills, that physiological activity is neuromotor behavior. Having a seizure is not the result of a conscious or unconscious mental process, but is the result of a neurological process and, hence, is not psychomotor behavior. The Applicant's original disclosure, in several locations, discussed neurological and psychological activity and neurolinguistics with psycholinguistics in ways indicative of an understanding the two sciences are separate and the Applicant appropriately limited the claims herein to psychomotor behavioral activities. Rise teaches sensing neuromotor behavioral activity and the physiological activities related thereto (see col. 2, lines 61-67). Rise does not teach, disclose, or suggest sensing at least one psychomotor behavioral activity.

Specifically, Rise in view of Lieberman fails to at least teach, disclose, or suggest calculating the individual's preferred modalities based on the sensed psychomotor behavioral activity. At paragraph 77 of the Applicant's original disclosure, preferred modalities are defined as "the conscious or nonconscious desires of the individual to experience her environment in a specific manner." Lieberman teaches various methods of measuring, quantifying, and maximizing the responsiveness (also referred to as "vigilance" in Lieberman) of individuals. Lieberman teaches methods of determining the effect of the environment on the responsiveness of an individual. Lieberman teaches making changes to the environment to increase the responsiveness of the individuals. However, Lieberman does not teach, disclose, or suggest calculating the preferred modalities of individuals. Lieberman does not teach, disclose, or suggest calculating the conscious or nonconscious desires of the individual to experience her environment in

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a specific manner. As stated in col. 2, lines 36-39, "a primary object of [Lieberman] is to monitor the alertness and vigilance of human subjects and to detect such degradations in such vigilance which may affect performance." Lieberman is not interested in any preferred modality of an individual; it is only concerned with how responsive/vigilant/alert the person is being.

As can readily be seen, the Applicant's claim is limited to sensing psychomotor behavior activity and calculating the individual's preferred modalities based on the sensed psychomotor behavioral activity, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

D. Claims 13-18

The Applicant respectfully submits that since claims 2-11 depend on independent claim 1, claims 2-11 contain all limitations of independent claim 1. Since independent claim 1 should be allowed, as argued above, pending dependent claims 2-11 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

1. Claim 14

Claim 14 presently reads:

The apparatus of claim 12 further comprising a memory device to store sensed psychomotor behavioral activity of the individual.

The Office Action states that Rise teaches the above limitation at col. 6, lines 4-10. This passage of Rise teaches the use of a microprocessor in predicting the onset of a seizure. This passage of Rise does not teach the

use of a memory device. This passage of Rise does not teach storing sensed information to a memory device. This passage of Rise does not teach storing sensed psychomotor behavioral activity on a memory device.

As can readily be seen, the Applicant's claim is limited to a memory device to store sensed psychomotor behavioral activity of the individual, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

2. Claim 15

The Applicant respectfully submits that since claim 15 depends on dependent claim 14, claim 15 contains all limitations of dependent claim 14. Since dependent claim 14 should be allowed, as argued above, pending dependent claim 15 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

Further, the Office Action preliminarily rejects Claim 15 as obvious based on Rise, in view of Lieberman and further in view of Lamblin. The Office Action states that "it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the Lamblin's algebraic code excited linear speech coding with Rise and Lieberman because that would have allowed users of Rise and Lieberman to analyze various waveforms that related to psychomotor behavior of humans." The Applicant does not see how the linear algebraic transforms of Lamblin affect the limitation of claim 15, which is not drawn specifically to linear algebraic transforms. Claim 15 is drawn to using stored psychomotor behavioral activity to refine a calculation of preferred modalities. Lamblin does not teach, disclose, or

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suggest calculating preferred modalities, nor does Lamblin teach, disclose, or suggest using stored sensed data for refining such a calculation.

As can readily be seen, the Applicant's claim is limited to the processing unit using stored sensed psychomotor behavioral activity of the individual to refine the preferred modality calculation, rendering the claim nonobvious in view of Rise, Lieberman, and Lamblin. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

3. Claim 16

Claim 16 presently reads:

The apparatus of claim 13 wherein the preferred modalities are calculated while sensing psychomotor behavioral activity and concurrently used for modifications to the environmental units.

The Office Action states that Rise teaches the above limitation at col. 6, lines 4-10. This passage of Rise teaches the use of a microprocessor in predicting the onset of a seizure. This passage of Rise does not teach the calculation of preferred modalities. This passage of Rise does not teach calculating preferred modalities while sensing psychomotor behavioral activity. This passage of Rise does not teach using the preferred modalities for modifications to the environmental units while concurrently sensing psychomotor behavioral activity.

As can readily be seen, the Applicant's claim is limited to a memory device to store sensed psychomotor behavioral activity of the individual, rendering the claim nonobvious in view of Rise and Lieberman. Therefore, the Applicant respectfully requests withdrawal of the present rejection.

II. Prior Art Made of Record

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

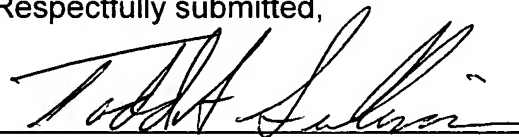
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CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, the Applicant respectfully submits that all objections and rejections have been traversed, rendered moot and/or accommodated, and that presently pending claims 1-18 are in condition for allowance. Favorable reconsideration and allowance of the present application and the presently pending claims are hereby courteously requested. If in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (603) 668-1400.

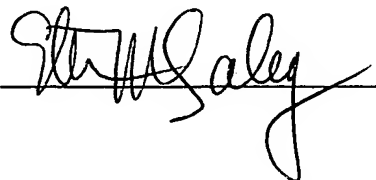
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